Delta Operations for Salmonids and Sturgeon (DOSS) Group
Conference call: 04/12/11 at 9:00 a.m.

Objective: Provide advice to the Water Operations Management Team (WOMT) and National Marine Fisheries Service (NMFS) on measures to reduce adverse effects from Delta operations of the Central Valley Project and the State Water Project on salmonids and green sturgeon. DOSS will coordinate the work of other technical teams. DOSS notes and advice can be found at: http://swr.nmfs.noaa.gov/ocap/htm

DWR: Andy Chu, Mike Ford, Angela Llaban, Cynthia LeDoux-Bloom
FWS: Nick Hindman, Roger Guinee
NMFS: Barbara Rocco, Barb Byrne, Garwin Yip, Bruce Oppenheim, Jeff Stewart
DFG: Dan Kratville, **Reclamation:** Thuy Washburn, John Hannon, Rachel Barnett-Johnson
SWRCB, EPA: not present

Action Items:

1) **DWR** will get back to DOSS group on accounting for Article 21 water. No new update.
2) **Real-time reporting:** DWR (LeDoux-Bloom, Chu) met with their staff and employees at the Skinner facility on 4/8. It was suggested that DOSS move data reading responsibility to Reclamation; however, Reclamation did not want to do this. DFG thought it was less expensive to add CWT tag reading to their task on the existing contract. DWR also discussed reporting out of salvage data in real time. DWR is working through the contract issues with DFG.

Agenda

1) Fish monitoring data
2) Water project operations & OMR flows
3) Weather forecast
4) Update on VAMP
5) Update on NMFS 2011 RPA adjustments

Fish Monitoring: The following table presents the fish monitoring data from 4/4–4/11/11

Location	Chipps Is. Midwater Trawl	Sacramento Kodiak Trawl	Mossdale Kodiak Trawl	Beach Seines	Knights Landing RST	Tisdale Weir RST	Moulton Weir RST	Deer/Mill Creeks RST
Sample Date	4/4, 6, 8	4/4, 6, 8		4/5, 6, 7	4/4–4/11	4/4–4/11		
Total Catch	**18**	**8**		**178**	**116**	**135**		
FR		1		127	75	106		
LFR				7		1		
WR	4	1			1	3		
SR	10	5		40	38	24		
(Ad-clips)								
DS	1			4				

LFS					2			
SPTL	2	1						
SH (ad-clip)	1					1		
SH (natural)								
Temp (°F)	56.5	54.3		55.8	54.6	52.0		
Flows (cfs)					25,952	33,200		
Turbidity NTU)					46.4	37.0		
FR/SR CPUE					5.49	8.24		
WR/LFR CPUE					0.143	0.255		

Key: FR = Fall run; LFR = Late-fall run; SR = Spring run; WR = Winter run; SH = Steelhead; DS = Delta smelt; LFS = Longfin smelt; SPTL = Splittail, CPUE = average catch per unit effort.

Tisdale: Chinook numbers are dropping off now; some winter-run sizes are still coming down.

Mossdale: Trawls were turned over to DFG Region 4 on April 1, 2011. DFG started on 4/4/11, which is later than usual. FWS will resume control of Mossdale the first week of June 2011. Chinook numbers have been really low; five trawls from 4/4–4/9. 1 RBT on 4/4 but it was really small (292 mm). For comparison, last year 43 Chinook were caught by this date; the year before, 111 Chinook were caught. Low Chinook numbers could be the result of the high San Joaquin River flows, which makes trawling inefficient.

Beach Seines: 4 delta smelt from 60 to 72 mm were caught at Rio Vista and Garcia Bend.

Salvage data (4/4–4/10): For additional info see:
http://www.water.ca.gov/swp/operationscontrol/calfed/calfedmonitoring.cfm

Chinook salmon loss by race

	CVP	SWP
Winter-run	0	36
Spring-run	54	811
Fall-run	0	42
Late fall-run	0	0

CVP: 68 spring-run salvaged for a loss of 54, no other races.

SWP: 10 fall-run were salvaged for a loss of 42 loss; 191 spring-run salvaged for a loss of 811, 8 winter-run were salvaged for a loss of 36.

Cumulative YTD totals: Since Oct. 1st, 2010 the winter-run loss = 4,356. Salvage has probably peaked based on previous years. Incidental take is ~66% of the total YTD loss.

Steelhead salvage: CVP: None. SWP: 5 ad-clipped, 43 non-clipped. The cumulative YTD since Oct. 1st, 2010 is 356 non-clipped, or 11% of the incidental take limit.

Coleman National Fish Hatchery: FWS is beginning to release fall-run Chinook (5.4 million); the first of four releases (22 million total; higher than past releases) will be at Battle Creek; 25%

are marked. They should begin to show up at Knights Landing and Tisdale in a few days. Flows on the Sacramento River are increasing which is good for releases. Because of fishery shutdowns in the ocean, FWS split releases last year and transferred some to San Francisco Bay because they got higher returns on those. The downside is that a lot of those fish will stray and not return to the hatchery.

SWP & CVP OLDER JUVENILE* CHINOOK LOSS & LOSS DENSITY
04/4/2011 through 04/10/2011

Date	OLDER JUVENILE LOSS** (# fish)			Combined Older Juvenile Loss Density (fish/TAF)
	SWP	CVP	Combined	
4/4/2011	0.00	0.00	0.00	0.00
4/5/2011	0.00	0.00	0.00	0.00
4/6/2011	17.97	0.00	17.97	1.80
4/7/2011	0.00	0.00	0.00	0.00
4/8/2011	17.52	0.00	17.52	1.51
4/9/2011	0.00	0.00	0.00	0.00
4/10/2011	0.00	0.00	0.00	0.00

DWR-DES 4/11/2011
Preliminary, subject to revision
*Older juveniles defined as all Chinook > minimum winter run length (Delta Model)
**Loss data obtained from DFG, Stockton

On 4/11/11, yesterday, the estimated older juvenile loss density = 0.

Steelhead: Estimated losses have decreased; the loss density was below 3.01 (4/5 = 1.33, 4/6 = 0, 4/7 = 1.64, 4/8= 2.99, 4/9 = 2.78, 4/10 = 0). DOSS advice will be to return to default flows in NMFS 4.2.3 RPA. The steelhead loss density trigger was met on 4/4, but time allowed for implementation (3 days) brought it to 4/7. Therefore, 4/7 would be first day to advise to go back to the -5,000 cfs default.

DOSS reviewed the salmon loss-density data contained in the table above and concluded that loss densities have been below the first trigger (3.32 fish/TAF) since the last conference call on 4/5/11. DOSS also discussed the steelhead loss density trigger of 8 and 12 steelhead/TAF contained in the NMFS BiOp. Steelhead loss densities have been below 8.0 steelhead/TAF since 4/5/11. The preliminary loss density on Monday, 4/11/11, was zero for salmon and 0.21 for steelhead. DOSS approved use of same method for estimating steelhead loss as that used for salmon until a steelhead loss formula can be developed and agreed on.

DWR (Llaban): Asked DFG to verify steelhead loss calculations. DFG would verify only steelhead salvage data and were not comfortable verifying loss data. DFG has not confirmed that the same calculation used for loss can be used for both steelhead and Chinook salmon. DOSS decided to continue to use the rough estimator of 4.3 for calculating steelhead loss data, until an exact loss density calculation for steelhead can be validated.

Action item: DOSS will continue to work on verifying the calculations for steelhead loss for next year, and attempt to get agreement among the agencies on how to develop a loss equation for steelhead (*i.e.*, determine parameters). Since no one is working on this, it will take time to develop the calculation and change the DFG data entry program. There is most likely a formal process to go through.

Coded wire tag update: No tags have been read this week. Expecting an update from FWS; picked up only two tags from SWP. DWR (Llaban) will send out update to the DOSS group.

Smelt Working Group (SWG): Reviewed the hydraulic data; 62 adult delta smelt from the Sacramento Deep Water Channel; some are in the central Delta. There were spent females in Suisun Bay. Larval #3 survey is in field this week; the spring survey is done; salvaged 1 delta smelt on 4/5; no longfin since January. The positive OMR flow is keeping delta smelt to the west of the pumps; no recommendations. No larval fish have been observed yet. DFG made no longfin smelt recommendations. 1 delta smelt larva was captured in survey #1 a few weeks ago. For SWG notes see:http://www.fws.gov/sfbaydelta/ocap/

Project Operations (4/12/11)

SWP		CVP	
Flows/Exports (cfs)			
Clifton Court Forebay	4,500	Jones Pumping Plant	1,800
Outflow		American- Nimbus	10,000
Total Delta Inflow	95,703	Sacramento-Keswick	9,250
		Stanislaus - Goodwin	3,000
Feather - Oroville	6,000	Tuolumne	10,000
Sacramento River at Freeport	60,663	Merced	5,700
San Joaquin at Vernalis	27,179	Friant - SJR	8,900
OMR daily	~9,000		
OMR 5 day	9,094		
OMR 14 day	9,431		
Reservoir Storage (TAF)			
San Luis	1,067	San Luis	967
Folsom	700	Shasta	3,914
New Melones	1,988		
Oroville	2,978		
Delta Operations			
DCC	closed	X2 (km)	56
Outflow Index (cfs)	87,500		
Inflow diverted (%)	4.7		
Water Temperature (°F)	57.4		

Federal: Jones Pumping Plant: There will be an outage on Thursday for maintenance. New Melones storage: currently, 3,400 cfs inflow, 3,120 cfs outflow; just at the flood control curve. Flood stage is 2.1 MAF and it's at about 2.0 MAF now.

Sacramento River: The Temperature Management Group should have a meeting this month; no notice yet. **Action item**: Oppenheim will check with USBR Shasta operator on next meeting date.

State: SWP side of San Luis Reservoir is full.

Weather forecast: There is a storm system coming tomorrow, but not a lot of rain is expected compared to March storms. Over the next 10 days, only about 0.3 inches are expected, so it will definitely be dryer. Snow may be above 6,000 feet. There could be another storm this weekend but it will be warmer. Most activity will be north around the Shasta area. DWR may increase Oroville releases in anticipation of snow melt.

San Joaquin River Inflow to Export Ratio: Vernalis projections are showing about 27,000 cfs for the next 4 days; no measurable precipitation out of coming storm system. The NMFS BiOp (RPA 4.2.1) requires an action once the flood warning stage drops to 24.5 feet or 21,750 cfs. The question was raised about whether there was any expectation that levels will drop by May. DOSS needs to start monitoring Vernalis flows because this could potentially have an impact on combined exports. Most of the San Joaquin tributary reservoirs are near full and could start spilling for flood control. The latest rating curve from USGS; looking at recent hourly data, a 24.5 ft river stage corresponds to flood monitor stage of 22,400 cfs.

DWR (Chu): Requested a subgroup to discuss how to implement this RPA in May. The concern is how to report Vernalis flow data during the first 14 days in April.

Byrne: Suggested a spreadsheet of data and scheduling bringing it up to day 14. Chart should show good-faith effort along the way and the 4:1 would comply by day 14. If we never get to 14 days below flood stage (21,750 cfs), as long as it shows appropriate ratio scheduled, it should be in compliance. If the CDEC projection 2 days out shows that Vernalis will drop below 21,750 cfs, DWR will show that they will schedule exports based on those projected flows.

DOSS discussed some alternatives and agreed to form a subgroup. The concern being what day to start on and what if Vernalis flows fluctuate above and below the flood warning stage.

Action item (Byrne): will initiate a subgroup and draft spreadsheet idea and present for next Tuesday's DOSS call.

VAMP update: No Head of Old River barrier this year (flows too high). May 1st VAMP usual start time. VAMP meeting scheduled for 4/21. Both projects OK with starting on May 1st , however , the study fish may not be large enough for release. Some discussion of export levels during VAMP, but deferred to WOMT mtg later today. On the State side exports will be demand driven.

2011 RPA adjustments: NMFS issued 2011 amendments to USBR for the 2009 BiOp RPA (not yet posted to website): 4–5 issues, but the main points are clarifications that we've discussed over past 1.5 years and at the annual science panel review. Part was feedback:

Enclosure 1: 160 pages of RPA, short list of changes of about 20 pages

Enclosure 2: entire RPA will track changes accepted.

Minor changes to OMR flow criteria and second trigger for RPA action 4.2.3. For future reference to RPA, refer to the action and not page numbers any longer because page numbers have changed. Look at the cover letter that identifies the issues and efforts that we're working on (*i.e.*, OMR formula, coded wire tag data, temperature modeling for Sacramento River, etc.). There is rationale for every change made, including acknowledging typos. DWR has not yet provided comments. NMFS met with Reclamation last month to get its input. No surprises; we've discussed all of these over past year.

Action item: DOSS will review the 2011 RPA adjustments document and discuss next week.

2012 Annual Review: Annual reviews are built into the NMFS RPA to review operations at end of each calendar year. Issues for next year's review;

1. Improve flexibility of operations from 2011 RPA adjustments
2. Determine parameters for steelhead loss calculation
3. Review implementing criteria for RPAs in the Delta

DOSS advice to WOMT and NMFS: DOSS advises relaxing the OMR flow criteria from -3,500 cfs to no more negative than -5,000 cfs (default in NMFS BiOp until June 15) as of today, based on both the salmon and steelhead loss density being below the triggers in the NMFS BiOp.

Next Meeting: Conference call, 4/19/11, 9:00 a.m.